

# McCurdy (S. L. e. R.)

## A Modification of Wyeth's Method of Bloodless Amputation at the Hip Joint.

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THE advance made in amputations at the hip joint, as suggested by Professor John A. Wyeth, must be considered one of the principal ones in modern operative surgery. The operation is described by Wyeth as follows :

The patient being placed in position with the hip of the side to be operated on well over the corner of the table, the foot is elevated, and an Esmarch bandage applied to drive the contained blood toward the heart. The bandage should not be tightly put on over the seat of the disease for fear of driving septic matter into the circulation. With the rubber bandage still in position, the needles are next introduced.

Two steel mattress needles, three sixteenths of an inch in diameter and a foot long, are used. The point of one is inserted an inch and a half below the anterior superior spine of the ilium and slightly to the inner side of this prominence, and is made to

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traverse the muscles and deep fascia, passing about half way between the great trochanter and the iliac spine, external to the neck of the femur and through the substance of the tensor *vaginae femoris*, coming out just back of the trochanter. About four inches of the needle should be concealed by the tissues.

The point of the second needle is entered an inch below the level of the crotch, internally to the saphenous opening, and passing through the adductors comes out about an inch and a half in front of the tuber ischii. No vessels are endangered by these needles. The points are protected by corks to prevent injury to the operator's hands.

A piece of strong, white rubber tube, half an inch in diameter and long enough when tightened in position to go five or six times around the thigh, is now wound very tight around and above the fixation needles and tied.

The Esmarch bandage is removed, and five inches below the tourniquet a circular incision is made, and a cuff, which includes the subcutaneous tissues down to the deep fascia, is dissected off to the level of the lesser trochanter, at which level the muscles and vessels are divided squarely and the bone sawed through. All vessels (including the veins) which can be seen are tied with catgut, and the smaller bleeding points can be discovered by slightly loosening the tourniquet, which is then entirely removed.

The remaining portion of the femur is now easily enucleated by dividing the attached muscles close to the bone and opening the capsule as soon as it is reached. . . .

One other important point I wish to emphasize—viz., the advisability in certain cases of doing this operation in two sittings.

In one of my cases the patient was greatly exhausted, and after dividing the femur at the lesser trochanter and securing the vessels, fearing the supervention of shock, as indicated by the pulse, I closed the wound, which healed by first intention. At the first dressing (on the seventeenth day), the remaining portion of the bone was removed by an incision over the trochanter major. The recovery was uninterrupted.

I should prefer to complete the operation at one sitting, but cases will occur where the danger of shock may be obviated by

stopping short of enucleation, leaving this for a week or two when reaction and convalescence are assured.

In neither of my cases was there any bleeding, and, in fact, amputation at the hip joint is now a bloodless operation.

I have some hesitation in even presenting a modification of an operation devised by so eminent a surgeon, and one that has been so extensively used by surgeons throughout the country. It has occurred to me, however, that the disadvantage of even having it necessary under extreme circumstances to subject a patient to a second operation should be avoided if possible.

Some have been content with what is known as Jordan's operation, which is performed by making an incision from over the greater trochanter to the end of the stump and down to the bone. The head of the bone is then disarticulated and the soft parts are dissected from the trochanters and shaft down to a line with the lower edge of the flap. The head of the bone thus liberated is swung out so as to admit the assistant's hand into the cavity, pressure being made internally upon the femoral with one hand and externally with the other hand. With the assistant still at his task of controlling the vessels, the surgeon proceeds to make the flaps, ligate the femoral, etc.

To perform this operation well, one must have a skillful, trusty, and, above all, muscular assistant. The task of controlling the femoral artery with the fingers while the hip joint is opened and the head and neck of the femur are dissected from the dense soft structures surrounding it, with the making of the flap and the ligating of the vessels, is, to say the least, trying.

An effort has been made to combine what appears to be the advantages of both the above-described methods, and at the same time make the operation as bloodless as

Wyeth's and as rapid as Jordan's. As is shown in the accompanying drawing, the Wyeth operation is so modified

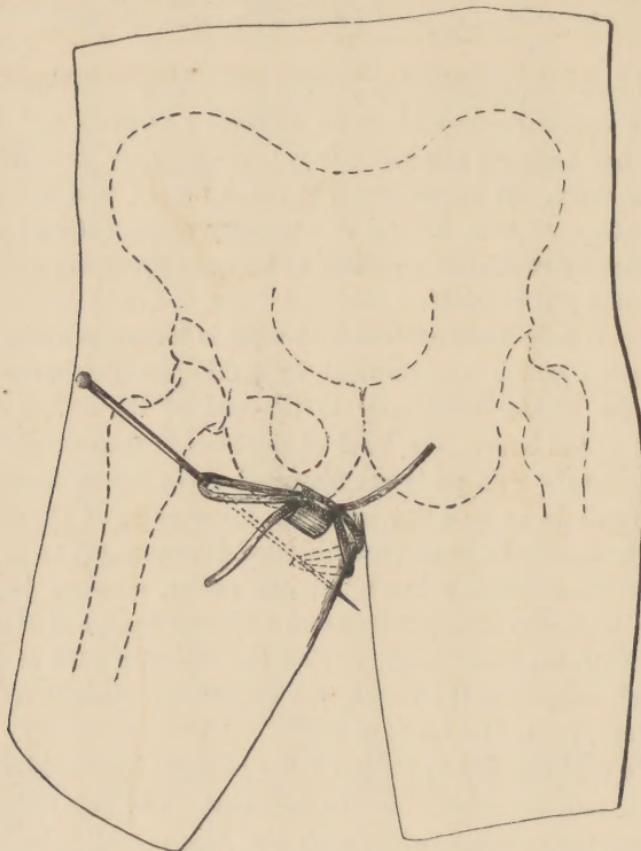


FIG. 1.

as to be performed with but one needle instead of two, and *always at one sitting*.

First draw a line from the most prominent point of the greater trochanter to the perineum. The needle is entered on this line at a point just internal to the femur, and is passed directly through the thigh so as to make its exit just

below the *tuber ischii*. Passed through at this point the needle will be external to all the important blood-vessels, and the only haemorrhage possible will be from the smaller vessels upon the external aspect of the thigh. A figure of 8 is now made by throwing a round rubber tourniquet around

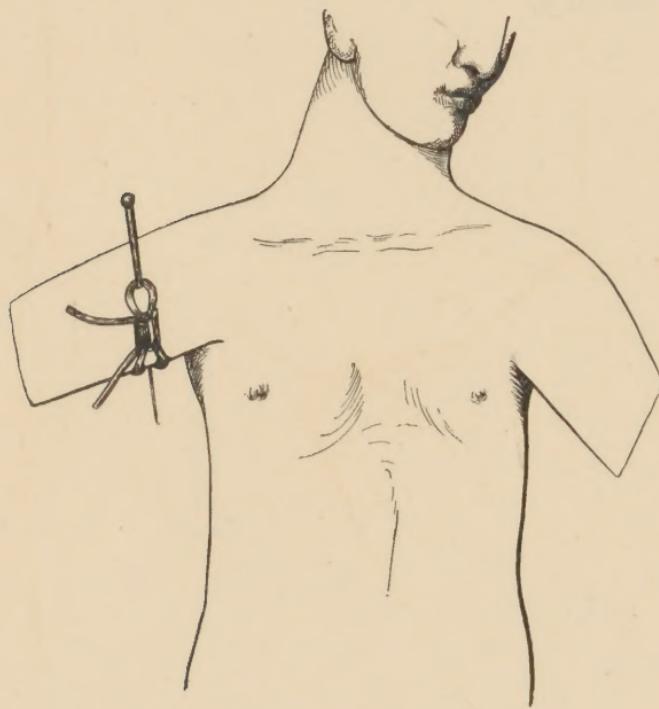


FIG. 2.

the projecting ends of the needle, over the internal aspect of the thigh, sufficiently tight to destroy femoral pulsation beyond the tourniquet. The flaps are now made, which is followed by disarticulation.

After ligating the blood-vessels, the cord and needle are removed and the stump is ready for final dressing. The

point of the needle should be guarded, as Wyeth suggests, with a cork.

The second cut is prepared in view of carrying out the same idea of a bloodless amputation at the shoulder joint. The steps in such an operation are at once suggested to the surgeon, after having studied the rules laid down for the hip operation.







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